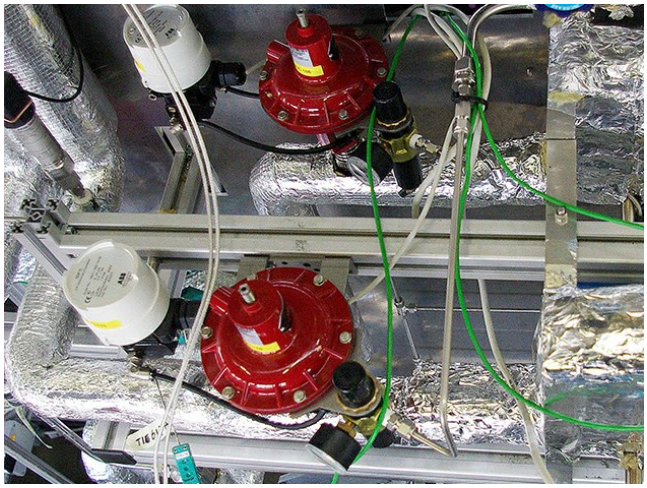
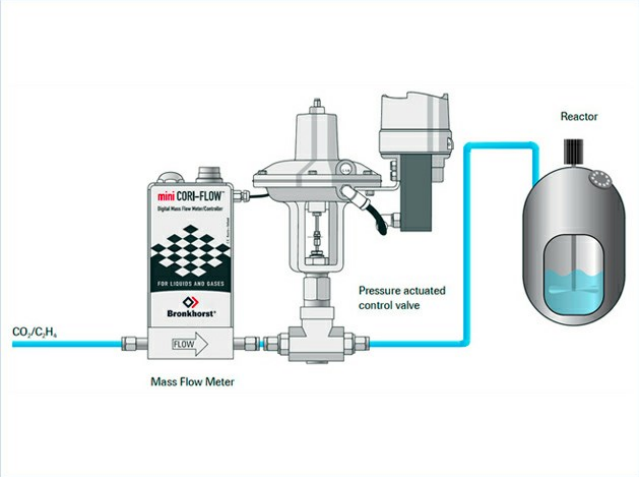
# MESURE ET RÉGULATION DE GAZ SUPERCRITIQUES

**APPLICATION NOTE**

# SUPERCRITICAL FLUID MEASUREMENT AND CONTROL

Fluids like carbon dioxide ($CO_2$) are difficult to measure when they move towards the inter-phase stage between being a liquid and a gas. For example, the supercritical point of $CO_2$ is reached at 73,8 bara and 31,1 °C. Beyond these conditions, physical properties like density (ρ) and heat capacity (Cp) change very rapidly as a result of pressure or temperature variations. This makes an accurate mass flow measurement, based on the thermal principle, very difficult.






## Application requirements

mini CORI-FLOW mass flow meters offer a solution here because of the true mass flow measurement, independent of physical properties. The true mass flow of the molecules is measured, regardless of whether the fluid is in gas phase, in liquid phase or indeed somewhere in between. Experiences in the field have proven that this principle of measuring is very accurate and reliable. For control applications Bronkhorst can offer a flow meter in combination with a metal sealed, pressure actuated control valve. Please contact factory for a customised advice.

## Recommended Products


### MINI CORI-FLOW™ M14

Débit min. 0,03…1 kg/h
Débit max. 0,3…30 kg/h

Pression 200 bar

Indépendant des propriétés du fluide

Grande précision


### MASS-STREAM D-6340 MFM

Débit min. 0,14…7 ln/min
Débit max. 0,5…50 ln/min

Pression jusqu'à 20 bar

Boîtier robuste (IP65)

Option afficheur TFT intégré

**BRONKHORST (SCHWEIZ) AG**

Gewerbestrasse 7

4147 Aesch BL (CH)

Tel. +41 617159070

info@bronkhorst.ch